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10/540,768

12/16/2005

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EXAMINER

VAUGHAN, MICHAEL R

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/540,768	<b>Applicant(s)</b> MIZUTANI ET AL.	
	<b>Examiner</b> MICHAEL R. VAUGHAN	<b>Art Unit</b> 2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-8 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8 and 15-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/24/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The instant application having Application No. 10/540,768 is presented for examination by the examiner. Claims 1-3 and 6-8 are amended. Claims 4, 5, and 9-14 have been canceled. Claims 1-3, 6-8, and 15-18 remain pending.

### ***Response to Amendment***

#### ***Drawings***

The objections to the drawings are withdrawn.

#### ***Claim Objections***

Claims 2-3 and 15-18 are objected to because of the following informalities:

As dependent claims they should further limit “the” claimed invention of the parent claims. Using the word “a”, i.e. “A network device” does not solidify the dependency to the parent claim.

Claims 15-18 all recite “A network system” yet the independent claim recites a network device.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 7 is rejected under 35 U.S.C. 101 as directed to non-statutory subject matter of software, per se. The claim lacks the necessary physical articles or objects to constitute a machine or manufacture within the meaning of 35 U.S.C. 101. It is clearly not a series of steps or acts to be a process nor is it a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. It is at best, function descriptive material per se.

Claim 7 still lacks the necessary requirements to squarely put the claim within a statutory class of invention. A computer readable medium needs to embody a program which when executed by a computer, said computer performs the functions of the claim. A computer readable storage medium cannot record a program by itself. A program can do nothing without a computer.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 6-8, and 15-18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, there is confusion between recited "a network device"(of the preamble), network devices, group of network devices, and said network devices of said group. The terms are used seemingly interchangeably yet each should carry specific function. Appropriate correction is required. As a result, it is impossible to definitively set the scope of the invention. Similarly, "said external storage medium" lacks antecedent basis. Dependent claims are likewise rejected.

As per claim 6, the first device lacks antecedent basis (last line page 15 of the clean copy).

As per claim 7, said devices lacks antecedent basis (in second limitation).

As per claim 6 and 7, the term "all other devices" should be all other network devices to have antecedent basis.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 6, and 7, have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6-8, and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6,195,751 to Caronni et al, hereinafter Caronni in view of USP Application Publication 2003/0233573 to Phinney.

As per claim 1, Caronni teaches a network device, comprising:

cipher communication means for performing cipher communication with a group of network devices using a common encryption key that is mutually authenticated by the group of network devices (col. 7, lines 5-6);

group management means for managing the group of network devices in the performance of said cipher communication using said common encryption key (col. 7, lines 7-9);

storage means for storing cipher communication information including said common encryption key and identification information identifying the network devices of said group (col. 7, lines 53-55);

acquiring cipher communication information, said cipher communication information enabling said network device to perform said cipher communications with said network devices of said group (col. 7, lines 24-25);

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means for adding an identification of the network device to said cipher communication information and for storing said cipher communication information into said storage means (col. 12, lines 30-35);

means for sending identification information of the network device, as a group participation notification, to said group of network devices (col. 7, lines 22-25);

means for receiving a group participation notification and for adding identification information included with said received group participation notification to said cipher communication information stored in said storage means and wherein said cipher communication means performs a cipher communication between network devices in said group according to said identification information included in said cipher communication information stored in said storage means using said common encryption key (col. 7, lines 40-45). Caronni teaches all of the limitation of this claim with the exception of using an external storage medium to facilitate the group functions.

Phinney teaches a similar system as Caronni with regards to performing group management function between member but uses an external storage medium [CSM CCS] to facilitate joining (0122) and leaving (0123) the group. In Phinney the external medium contain and hold the necessary cryptographic and cipher communication information as a security feature. It is within the ordinary capabilities of one of ordinary skill in the art to substitute known method which yield predictable results. Using the external storage means of Phinney within the system of Caronni would achieve higher security. If the members of the group need a physical device present to participate in the group, the system is more secure. Taking the physical device to the members also

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solves the problem of how to get a shared secret to a new member without using an insecure channel.

As per claim 2, Caronni teaches group management means further comprises: means for notifying each network device of said group of a withdrawal by the network device from cipher communication with said group according to the identification information stored in said storage means, and deleting said cipher communication information from said storing means when a second external storage medium having no cipher communication information stored thereon is mounted at the network device (col. 14, lines 47-51); and

means for deleting identification information associated with a first network device in said group of network devices from said cipher communication information stored in said storage means when a notification of withdrawal of said first network device is received through said cipher communication means (col. 14, lines 59-61).

As per claim 3, Caronni is silent in explicitly teaching when the first external storage device is mounted, said group management means compares group identifiers corresponding to cipher communication information stored on the first external storage device with group identifiers of cipher communication information stored in said storage means and copies said cipher information stored in said storage means to said first external storage device if a match is detected between the respective group identifiers. Phinney teaches these limitations as updating the keying material within the external devices when connected with the group member (0125). Examiner supplies the same



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rationale for the combination of Caronni with the external storage device of Phinney as it relates to increasing security.

As per claims 6 and 7, Examiner supplies the same rationale for the combination of Caronni with the external storage device of Phinney as used in the rejection of claim 1. Using the taught features of the external storage device, one of ordinary skill could substitute it within the system of Caronni. Caronni teaches the limitations of the claim without the requirements of the external storage device. Using the storage device of Phinney as intended by Phinney within the confines of Caronni would render obvious the claim's limitations. Caronni teaches a group management method for network devices belonging to a group of network devices which perform cipher communication via a network, the method comprising:

a group generation step, performed when a first external storage medium is mounted at a first network device belonging to said group of network devices and said first network device does not hold cipher communication information, in which the first device generates an encryption key used for said cipher communication (col. 9, lines 52-53), and holds, as cipher communication information, said encryption key and network device identification information and copies said cipher communication information to a first external storage medium allocated to the group of network devices (col. 10, lines 55-57);

a first group participation step, performed when the first external storage medium which stores cipher communication information is mounted at the first network device and said first network device does not hold cipher communication information, in which

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said first network device sends identification information as a group participation notice through said cipher communication to devices of said group (col. 7, lines 22-27), and adds identification information of the first network device to said cipher communication information acquired from the first external storage medium and holds said cipher communication information (col. 12, lines 30-35);

a second group participation step, performed when the first network device receives a group participation notice comprising identification information from another network device in said group of network devices, in which the first network device adds said received identification information to said cipher communication information (col. 13, lines 30-34);

a first withdrawal step, performed when the first network device holds cipher communication information and a second external storage device which does not hold cipher communication information is mounted at the first network device (0123 of Phinney), in which the first network device sends information indicating its withdrawal from the group and identification information to all other devices in said group based on identification information stored at said first network device in said cipher communication information, and thereafter deletes said cipher communication information (col. 14, lines 47-51 and lines 59-61); and

a second withdrawal step, performed when said first network device receives information indicating that another network device in the group of network devices is withdrawing from cipher communications, in which said first network device deletes the identification information corresponding to said another network device from the cipher -

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communication information held by the first network device (col. 11, lines 37-43).

Phinney teaches when a second storage device is inserted that the joining to the group must be restarted. Therefore it is obvious that the member is removed from the group with the storage device is removed. And as Caronni teaches, when a member withdraws, the others are notified. Again these limitations are met by combining the functions of the external storage device of Phinney within the system of Caronni.

As per claim 8, Caronni is silent in disclosing the first external storage medium, which stores said cipher communication information, is mounted and cipher information is stored in said storage means, said group management means copies the cipher communication information stored in said storage means to said first external storage medium. Phinney teaches updating the keying material within the external devices when connected with the group member (0125). Examiner supplies the same rationale for the combination of Caronni with the external storage device of Phinney as it relates to increasing security.

As per claims 15-18, Caronni teaches a network system comprising a plurality of network devices, and a network that connects said plurality of network devices, wherein each of said plurality of network devices is a network device [distributed flat implementation] (col. 4, lines 52-55).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **MICHAEL R. VAUGHAN** whose telephone number is (571)270-7316. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:00pm, EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. R. V./

Examiner, Art Unit 2431

/Syed Zia/

Primary Examiner, Art Unit 2431